



U.S. Department
of Transportation

**Research and
Special Programs
Administration**

400 Seventh St., S.W.
Washington, D.C. 20590

JUN 30 2004

Mr. David Fulbright
WRD
720 Ramsey
Batesville, Arkansas 72501

Ref No.: 04-0124

Dear Mr. Fulbright:

This is in response to your letter concerning requirements in the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) for specification MC 331 cargo tank motor vehicles.

Requirements for the design, construction, and installation of attachments and appurtenances for MC 331 cargo tanks are set forth in § 178.337-3(g). These requirements became effective September 1, 1995. Retrofits of cargo tanks manufactured prior to September 1, 1995, were not required. For MC 331 cargo tanks manufactured after September 1, 1995, § 178.337-3(g) requires an attachment, appurtenance, structural support member, or accident protection device to conform to the following requirements:

1. Appurtenances and other accessories must be attached to a structural members, the suspension sub-frame, accident protection structures, and external circumferential reinforcement devices, when practicable.
2. A lightweight attachment to the cargo tank wall such as a conduit clip, brake line clip, skirting structure, lampmounting bracket, or placard holder must be of a construction having lesser strength than the cargo tank wall materials and may not be more than 72 percent of the thickness of the material to which it is attached. The lightweight attachment may be secured directly to the cargo tank wall if the device is designed and installed so that, if damaged, it will not affect the lading retention integrity of the tank. A lightweight attachment must be secured to the cargo tank shell or head by a continuous weld to preclude formation of pockets that may become sites for corrosion. **Attachments meeting the requirements of this paragraph are not authorized for cargo tanks constructed under part UHT in Section VIII Division 1 of the ASME Code.**
3. Except as indicated above the welding of any appurtenance to the cargo tank wall must be made by attachment of a mounting pad so that there will be no adverse effect upon the lading retention integrity of the cargo tank if any force less than that prescribed in § 178.337-3(b)(1) is applied from any direction. The thickness of the mounting pad may not be less than that of the shell wall or head wall to



040124

178.337-3

which it is attached, and not more than 1.5 times the shell or head thickness. However, a pad with a minimum thickness of 0.25 inch may be used when the shell or head thickness is over 0.25 inch. If weep holes or tell-tale holes are used, the pad must be drilled or punched at the lowest point before it is welded to the tank.

An MC 331 cargo tank manufactured after September 1, 1995, that does not conform to these requirements must be removed from service until appropriate repairs or modifications are made.

For MC 331 cargo tanks manufactured prior to September 1, 1995, appurtenances and accessories must be attached to the tank in accordance with the specification in effect at the time of manufacture. An MC 331 cargo tank that does not conform to the specification in effect at the time it was manufactured must be removed from service until appropriate repairs or modifications are made.

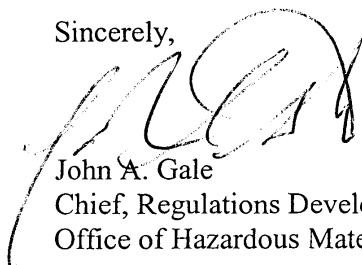
Furthermore, there are no provisions in the HMR for a non-conforming MC 331 cargo tank to remain in service until the next pressure test or re-chassis is done, regardless of its date of manufacture.

In order for a facility to perform repairs on MC 331 cargo tanks requiring welding to the cargo tank shell it must hold a valid National Board Certificate of Authorization for use of the "R" stamp and be registered in accordance with 49 CFR Part 107. Any repair involving welding on the shell or head must be certified by a Registered Inspector. Additionally, if a repair results in a design change, the design must be approved by a Design Certifying Engineer, and a Registered Inspector must certify that the cargo tank has been repaired and tested in accordance with the applicable specification.

Section 180.413 specifies that repair work on an MC 331 cargo tank must be performed in accordance with the National Board Inspection Code (NBIC) and the Compressed Gas Association's Technical Bulletin, TB-2. Since MC 331 cargo tanks are American Society of Mechanical Engineers (ASME) coded vessels, the Research and Special Programs Administration requires full compliance with the ASME Code, including its provisions for inspections and inspectors. The suitability of any repair affecting the structural integrity of the cargo tank must be determined by the testing prescribed in the applicable specification. See § 180.413.

I hope this information is helpful. Please contact us if you require additional assistance

Sincerely,

A handwritten signature in black ink, appearing to read "John A. Gale", is written over a large, stylized, handwritten "X" or "A" mark.

John A. Gale
Chief, Regulations Development
Office of Hazardous Materials Standards

Keberford
\$178,337-3
Cargo Tanks

INFOCNTR

From: dflpg@aol.com
Sent: Monday, May 10, 2004 3:19 PM
To: INFOCNTR
Subject: Information Center Comments/Questions

04-0124

Below is the result of your feedback form. It was submitted by david fulbright (dflpg@aol.com) on Monday, May 10, 2004 at 15:19:21.

Email: dflpg@aol.com

Name: david fulbright

Category: Specifications for Packagings (Sections 178.1 - 178.819)

Organization: wrd

Street: 720 ramsey

City: batesville

State: Arkansas

Zip Code: 72501

Phone: 870-793-2374

Comments: Ref: MC-331 (CFR 49 178.337-3 g (1)) Appurtenance to Cargo Tank

We have been told to remove the rain guard or rain shield on cargo tanks when we do V & P test and re-chassis if they exceed 72% of the material to which they are attached. Here lies the problem, while we don't have a problem removing the rain shield or other appurtenance that are attached to the cargo tank head or shell we believe that there are shops and owners that are not up to this type removal. Appurtenance was not addressed prior to 1989 CFR 49 edition, thousands of cargo tanks were built back before 1989. This should mean that tanks built before 1989 would be exempt from complying with this regulation. Tanks are still being manufactured today that are using clips, rain shields, guards that don't meet the 72% rule. These tanks do not meet the rule but are out there and in hazmat service.

My heart burn lies in that you are training your field people to red tag these units. After the cargo tank is red tagged the owner will need to bring into compliance before returning to service. My fear is that these shields, clips or other appurtenances will be removed by a shop, tester or owner that is not qualified to do this type work creating a far more dangerous problem than the thickness of the metal attached to the cargo tank wall. If this is a problem and needs correction then making the correction at the five year pressure test or tank re-chassis is a much better solution than having someone to try and remove the appurtenance at a V & K annual test. Having someone to cut or grind on an appurtenance attached to a cargo tank wall that may still contain lading is not the safest remedy to the problem.

We would like a formal interruption of this rule as to tanks built before 1989. For tanks built 1989 and after should they be immediately remove from service until the infraction is remedy or wait until first pressure test or re-chassis is done. The 72% rule could be noted on the V, K & P report to be complied with at the next pressure test or re-chassis.

After you have reviewed this information, please call if you have any questions, I can be reached at:

Phone: 870-793-6763
Fax: 870-793-8230
e-mail: dflpg@aol.com